

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

SHELTON, Michael C.

Serial No.: 10/796,235

Group Art Unit: 1796

Filed: March 9, 2004

Examiner: HAIDER, Saira B.

For: LOW MOLECULAR WEIGHT CARBOXYALKYLCCELLULOSE ESTERS
AND THEIR USE AS LOW VISCOSITY BINDERS AND MODIFIERS IN
COATING COMPOSITIONS

Mall Stop Amendment
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. 1.132

I, John M. Allen, am an inventor of U.S. Patent No. 5,668,273 ("the '273 patent"), which has been cited against the above-referenced application. I graduated from Niagara University with a Bachelor of Science degree in Chemistry. I also received a Ph.D. in Organic Chemistry from Ohio State University. I have been employed by Eastman Chemical Company for over 15 years. My current position at Eastman is Senior Research Associate, where I am responsible for overseeing process chemistry developments in cellulose esters. Other responsibilities I have held at Eastman have involved synthesis and research and development of cellulose esters, as well as cellulose ester application development. Additionally, I have worked with cellulose esters during my entire career at Eastman.

The '273 patent states that cellulose esters useful in the invention can have an inherent viscosity ("IV") ranging from "about 0.2 to 0.7 dL/g" ('273 patent, col. 4, ll. 45-46). In the Office Action, the Examiner takes the position that the lower IV limit disclosed by the '273 patent of about 0.20 dL/g is close enough to the upper IV limit recited in the claims of 0.12 dL/g that one skilled in the art would have expected the compositions of the '273 patent to have the same properties as the claimed

composition. However, not only would the carboxyalkyl cellulose esters of the '273 patent have different properties compared to the claimed composition, but lowering the IV of the cellulose ester in the '273 patent to below 0.2 dL/g would render the invention of the '273 patent unfit for its intended purpose. This is because one of the intended purposes of the '273 patent is to employ the carboxyalkyl cellulose esters in waterborne coatings. Waterborne coatings require a certain viscosity level in order to function properly as a coating composition. For instance, the '273 patent notes that the carboxyalkyl cellulose esters "are readily dispersed in waterborne formulations . . . and exhibit unusual rheological properties illustrated by an exponential increase in viscosity with a small increase in concentration of CMC ester. *This is thus beneficial in waterborne coatings*" ('273 patent, col. 2, ll. 53-58 (emphasis added)). Particularly, the '273 patent notes that a rapid viscosity build is useful for reducing runs and sags in waterborne spray applications ('273 patent, col. 6, ll. 24-26). If a carboxyalkyl cellulose ester having an IV below 0.2 dL/g was employed in the invention of the '273 patent, this viscosity increase would not be achieved, thus rendering it unsuitable for its intended use. Accordingly, one of skill in the art would not be motivated to lower the IV of the carboxyalkyl cellulose ester disclosed by the '273 patent to below 0.2 dL/g.

In the Office Action, the Examiner also relied on PCT Published Application WO 01/35719 to Obie ("Obie") in rejecting the claims of the above-referenced patent application. Specifically, as with the '273 patent above, the Examiner contends that the lower IV limit disclosed by Obie of about 0.20 dL/g is close enough to the upper IV limit recited in the claims of 0.12 dL/g that one skilled in the art would have expected the compositions of Obie to have the same properties as the claimed composition. However, it is my opinion, as one skilled in the art, that not only would the carboxyalkyl cellulose esters of Obie have different properties compared to the claimed composition, but lowering the IV of the carboxyalkyl cellulose esters to below 0.2 dL/g would render Obie unfit for its intended purpose. This is because, as with the '273 patent discussed above, the intended purpose of Obie is to employ carboxyalkyl cellulose esters in waterborne coatings, specifically aqueous stain compositions (Obie, p. 4, ll. 29-32). As mentioned above, waterborne coatings require a certain viscosity level in order to

function properly as coating compositions. However, if a carboxyalkyl cellulose ester having an IV below 0.2 dL/g was employed in the invention of Obie, the resulting waterborne coatings would not achieve the required viscosity level. Therefore, the carboxyalkyl cellulose ester would not be suitable for its intended use. Accordingly, one of skill in the art would not be motivated to lower the IV of the carboxyalkyl cellulose ester disclosed by Obie to below 0.2 dL/g.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of any patent issuing from the present application.

Date: January 29, 2009

John M. Allen
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